

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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Ex parte CHARLES LEU; GA-LANE CHEN

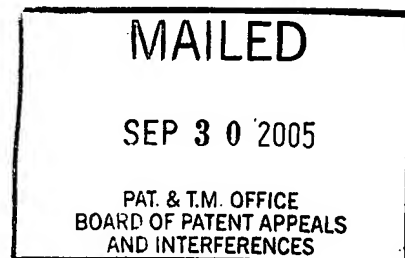
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Appeal No. 2005-2181  
Application No. 10/044,268

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ON BRIEF

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Before THOMAS, CRAWFORD, and LEVY, Administrative Patent Judges.  
CRAWFORD, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 3 and 7 to 14, which are all of the claims pending in this application.

We reverse.

The appellants' invention relates to a dense wavelength division multiplexing (DWDM) thin film filters and particularly to the composition of layers of high reflective index thin films of such thin film filters (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

#### The Prior Art References

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Rancourt et al. (Rancourt)	4,846,551	Jul. 11, 1989
Goossen	5,914,804	Jun. 22, 1999
Mitsui	6,042,752	Mar. 28, 2000
Pelekhaty	6,215,592	Apr. 10, 2001
Adair et al. (Adair)	6,490,381	Dec. 3, 2002 (filed Jun. 1, 2000)

#### The Rejections

Claims 1 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pelekhaty in view of Rancourt.

Claims 2 to 3, 8 to 10 and 12 to 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Pelekhaty and Rancourt as applied to claims 1 and 11 and further in view of Adair.

Claim 6 stands rejected under 35 U.S.C. § 103 being unpatentable over Pelekhaty in view of Rancourt and Adair as applied to claim 3 and further in view Goossen.

Claim 7 stands rejected under 35 U.S.C. § 103 being unpatentable over Pelekhaty and Rancourt as applied to claim 1 and further in view Mitsui.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the answer mailed April 19, 2005 for the examiner's complete reasoning in support of the rejections, and to the brief filed September 13, 2004 and the reply brief filed June 21, 2005 for the appellants' arguments thereagainst.

### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

We turn first to the examiner's rejection of claims 1 and 11 under 35 U.S.C. § 103 as being unpatentable over Pelekhaty in view of Rancourt. We initially note that the test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18

USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

The examiner finds that Pelekhaty describes the invention as claimed except that Pelekhaty does not describe that the high refractive index thin film is comprised of indium-tin oxide.

We find that Pelekhaty describes a Fabry-Perot filter that includes at least one pair of reflective elements such as mirrors separated by a fixed distance. The distance between the mirrors may be adjusted to tune the filter to reflect a selected channel wavelength of optical energy (col. 2, lines 1 to 6). The mirrors are formed by depositing alternating layers of high and low index of refraction materials to achieve desired reflectiveness (col. 2, lines 50 to 52). One of the materials described as a material that can form the low or high refractive index material is zirconium oxide (col. 5, lines 24 to 29).

The examiner relies on Rancourt for teaching that it is known that indium-tin oxide may be substituted for zirconium oxide and concludes:

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the indium tin oxide film taught by Rancourt in the Pelekhaty invention for the purpose of having a film with low resistance to light transmission and high scratch resistance [answer at pages 4 to 5].

The appellants argue that there is no motivation to combine the teachings of Pelekhaty and Rancourt.

We note that when it is necessary to select elements of various teachings in order to form the claimed invention, we ascertain whether there is any suggestion or motivation in the prior art to make the selection made by the appellants. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. The extent to which such suggestion must be explicit in, or may be fairly inferred from, the references is decided on the facts of each case, in light of the prior art and its relationship to the appellants' invention. As in all determinations under 35 U.S.C. § 103, the decision maker must bring judgment to bear. It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the appellants' structure as a template and selecting elements from references to fill the gaps. The references themselves must provide some teaching whereby the appellants' combination would have been obvious. In re Gorman, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (citations omitted). That is, something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. See In re Beattie, 974 F.2d 1309, 1311-12, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992); Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co., 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984).

The examiner argues that the motivation to combine the two references arises from the Rancourt reference which teaches that indium-tin oxide is an available known substitute for zirconium oxide.

We find that Rancourt describes an optical filter assembly to reduce glare and increase image contrast for use with cathode ray tubes (col. 1, lines 61 to 64). The optical filter assembly, in one example, comprises a two layer nonabsorbing optical coating having a layer of achromatizing material M over an aluminum oxide film. The M material may be cerium stannate, zirconium oxide or indium-tin oxide (col. 4, lines 16 to 22).


We will not sustain this rejection. In our view, there is no motivation or suggestion to modify the zirconium oxide material in Pelekhaty used to form reflective mirrors so as to reflect certain channel wavelengths with the indium tin oxide used as an achromatizing material in the Rancourt device which is designed to reduce glare and increase image contrast in a cathode ray tube. Even though Pelekhaty and Rancourt both describe zirconium oxide, the zirconium oxide is not used for the same purpose or in the same environment. As such, while Rancourt teaches that zirconium oxide and indium-tin oxide are exchangeable, this teaching is limited to the use in cathode ray tubes. In regard to the examiner's reasoning that the motivation to modify the Pelekhaty device such as to include indium-tin oxide instead of zirconium oxide is to improve the transmission of light and increase scratch resistance, we note that

Pelekhaty does not describe a need for improved light transmission or a problem with scratching. Therefore, this reasoning can not be utilized to form the motivation to establish a prima facie case of obviousness.


In view of the foregoing, we will not sustain the examiner's rejection of claim 1 and 11.

We will likewise not sustain the rejection of the remaining claims as each of the remaining rejections is based on the combination of Pelekhaty and Rancourt.

The decision of the examiner is reversed.

  
JAMES D. THOMAS  
Administrative Patent Judge

  
MURRIEL E. CRAWFORD  
Administrative Patent Judge

  
STUART S. LEVY  
Administrative Patent Judge

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